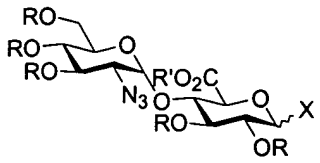
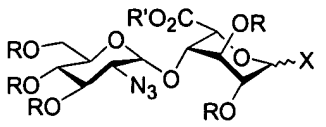
Claims

1. **(previously presented)** A disaccharide selected from the group consisting of:



and



;

wherein

X represents independently for each occurrence hydroxyl, acyloxy, silyloxy, halide, alkylthio, arylthio, 4-alkenyloxy, aryloxy, or $-OC(NH)CCl_3$;

R represents independently for each occurrence H, alkyl, aryl, arylalkyl, heteroarylalkyl, silyl, acyl, alkenyloxycarbonyl, or aralkyloxycarbonyl; and

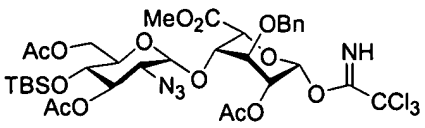
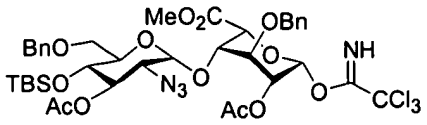
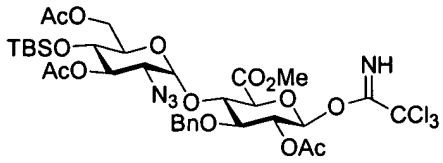
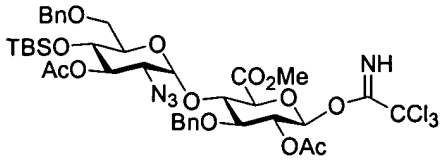
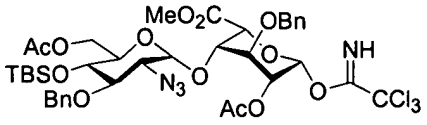
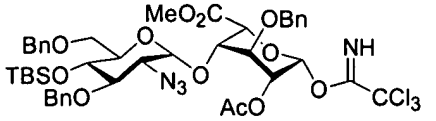
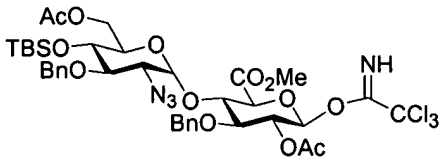
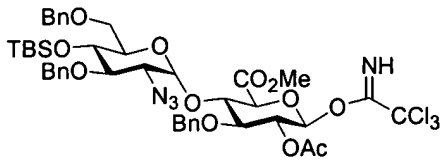
R' represents independently for each occurrence H, alkyl, aryl, arylalkyl, or heteroarylalkyl.

2. **(original)** The disaccharide of claim 1, wherein X represents fluoro, bromo, 4-pentenyloxy or $-OC(NH)CCl_3$.

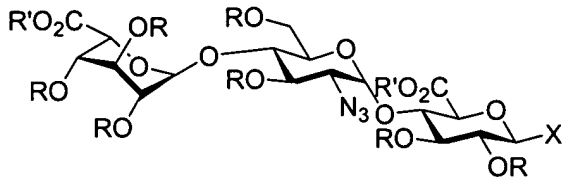
3. **(original)** The disaccharide of claim 1, wherein R' represents independently for each occurrence alkyl.

4. **(original)** The disaccharide of claim 1, wherein X represents fluoro, bromo, 4-pentenyloxy or $-OC(NH)CCl_3$; and R' represents independently for each occurrence alkyl.

5. **(original)** The disaccharide of claim 1, wherein said disaccharide is selected from the group consisting of:

6. **(previously presented)** A trisaccharide represented by:



wherein

X represents independently for each occurrence hydroxyl, acyloxy, silyloxy, halide, alkylthio, arylthio, 4-alkenyloxy, aryloxy, or -OC(NH)CCl_3;

R represents independently for each occurrence H, alkyl, aryl, arylalkyl, heteroarylalkyl, silyl, acyl, alkenyloxycarbonyl, or aralkyloxycarbonyl; and

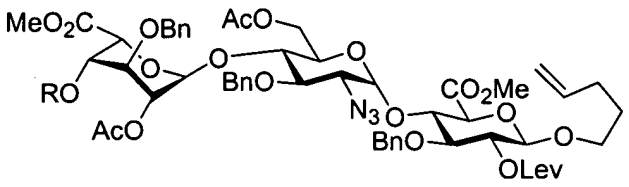
R' represents independently for each occurrence H, alkyl, aryl, arylalkyl, or heteroarylalkyl.

7. **(original)** The trisaccharide of claim 6, wherein X represents fluoro, bromo, 4-pentenyloxy or -OC(NH)CCl_3.

8. **(original)** The trisaccharide of claim 6, wherein R' represents independently for each occurrence alkyl.

9. **(original)** The trisaccharide of claim 6, wherein X represents fluoro, bromo, 4-pentenyloxy or -$OC(NH)CCl_3$; and R' represents independently for each occurrence alkyl.

10. **(previously presented)** The trisaccharide of claim 6, wherein said trisaccharide is selected from the group consisting of:



wherein

R is H or silyl.

11. **(currently amended)** A method of preparing a glycosaminoglycan, comprising the step of:

reacting a first mono-, di- or tri-saccharide, comprising an activated anomeric carbon, with a second mono-, di- or tri-saccharide, comprising a hydroxyl or amino group, to form an oligosaccharide linked to a solid support, comprising a glycosidic linkage between said anomeric carbon of said first mono-, di- or tri-saccharide and said hydroxyl or amino group of said second mono-, di- or tri-saccharide; wherein ~~the first mono-, di- or tri-saccharide or~~ the second mono-, di- or tri-saccharide is covalently linked to a solid support at an anomeric position; and said activated anomeric carbon is activated by a hydroxyl, acyloxy, silyloxy, halide, alkylthio, arylthio, 4-alkenyloxy, aryloxy, or -$OC(NH)CCl_3$ group.

12. **(original)** The method of claim 11, wherein the first mono-, di- or tri-saccharide is not identical to the second mono-, di- or tri-saccharide.

Claims 13-14 **(canceled)**

15. **(previously presented)** The method of claim 11 or 12, further comprising the step of:

cleaving said covalent linkage between said oligosaccharide linked to a solid support and said solid support with an alkene metathesis catalyst and an alkene.

16. **(previously presented)** The method of claim 11 or 12, further comprising the step of:

sulfating a hydroxyl or amino moiety of said oligosaccharide linked to a solid support.

17. **(previously presented)** The method of claim 11 or 12, further comprising the step of:

removing a hydroxyl or amino protecting group from said oligosaccharide linked to a solid support by hydrogenolysis.

18. **(original)** A method of preparing an oligosaccharide comprising an α-glucosamine glycosidic linkage, comprising the step of:

reacting a uronic acid glycopyranosyl acceptor, comprising a hydroxyl group at C4 and a cyclic acetal comprising C1 and C2, with a glycosyl donor, comprising an activated anomeric carbon and an azide functional group at C2, to form an oligosaccharide comprising an α-glycosidic linkage between said hydroxyl group of said uronic acid glycopyranosyl acceptor and said anomeric carbon of said glycosyl donor.

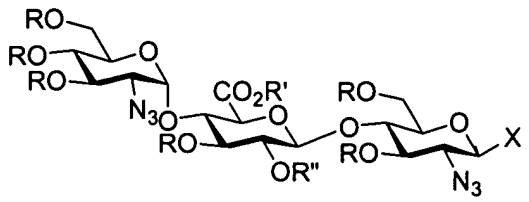
19. **(original)** The method of claim 18, wherein said uronic acid glycopyranosyl acceptor is an iduronic acid glycopyranosyl acceptor.

20. **(original)** The method of claim 18, wherein said uronic acid glycopyranosyl acceptor is a glucuronic acid glycopyranosyl acceptor.

21. **(original)** The method of claim 18, 19, or 20, wherein said glycosyl donor is a glycosyl fluoride or glycosyl trichloroacetimidate.

22. **(original)** The method of claim 21, wherein said cyclic acetal comprising C1 and C2 of said uronic acid glycopyranosyl acceptor is an isopropylidene acetal or a cyclopentylidene acetal.

23. **(previously presented)** A trisaccharide represented by:



wherein

X represents independently for each occurrence hydroxyl, silyloxy, halide, alkylthio, arylthio, alkoxy, aryloxy, or -OC(NH)CCl_3;

R represents independently for each occurrence H, alkyl, aryl, arylalkyl, heteroarylalkyl, silyl, acyl, alkenyloxycarbonyl, or aralkyloxycarbonyl;

R' represents independently for each occurrence H, alkyl, aryl, arylalkyl, or heteroarylalkyl; and

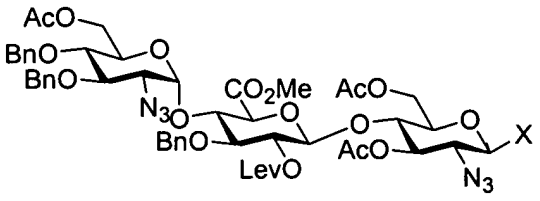
R" represents independently for each occurrence H, alkyl, aryl, heteroarylalkyl, silyl, acyl, alkenyloxycarbonyl, or aralkyloxycarbonyl.

24. **(previously presented)** The trisaccharide of claim 23, wherein X represents fluoro, bromo, 4-pentenyloxy or -OC(NH)CCl_3.

25. **(previously presented)** The trisaccharide of claim 23, wherein R' represents independently for each occurrence alkyl.

26. **(previously presented)** The trisaccharide of claim 23, wherein X represents fluoro, bromo, 4-pentenyloxy or -OC(NH)CCl_3; and R' represents independently for each occurrence alkyl.

27. **(previously presented)** The trisaccharide of claim 23, wherein said trisaccharide is:



wherein

X is silyloxy or -OC(NH)CCl_3.